remains. By these relics it is not difficult to trace in this area the gradual but certain progress of man from the glacial morning of his life down to the present day, without a break in his productive activity.

Dr. Heierli's address is entitled 'Die Archæologischen Funde des Kantons Schaffhausen in ihrer Beziehung zur Urgeschichte der Schweiz.' (Sauerlander, Aarau, pp. 31.)

THE SVASTIKA SYMBOL.

Dr. von Luschan in the Proceedings of the Berlin Anthropological Society last February described some weights from Ashantee, marked with the sign of the svastika, and also exhibited photographs of a woman of the Basundi tribe (East Africa, valley of the Kuilu River) who was tattooed over her body with a number of figures simulating the same symbol. He was not able to offer the meaning which in these different parts of the continent was attached to the sign, nor the native word for it.

It is quite possible that its occurrence in Africa should be referred to influence from India, which was exerted repeatedly from early times, although the design is a simple one and might have arisen spontaneously.

Dr. Von Luschan refers to its appearance in America as rare. The extremely well cut copper svastika from the Hopewell mound, Ohio, would intimate that it was an important and familiar device for some purpose. At any rate, it can no longer be maintained, as was argued some years ago, that it is an essentially 'Aryan' symbol. It apparently belongs to all races.

HOTTENTOT LYRICAL POETRY.

The Hottentots are often quoted as on or near the lowest round of the ladder of humanity. If that is correct it increases our respect for the race. Those who have studied them closest have in them found much to admire. One such trait is their regard for women. The missionary Hahn tells us that the most sacred oath a man can take is to swear by his eldest sister! So great is his veneration for her that he never addresses her first.

In a recent number of 'Globus,' Dr. Jacobowski collects from various sources some specimens of the lyrical poetry of the tribe. It is of a much higher grade, both in sentiment and expression, than we could have expected from the cultural condition of the people. One poem reads:

"My lioness! Dost thou fear that I will charm thee with magic arts? Soft is thy hand which milkest the cow. Bite me (*i. e.*, kiss me). Pour me the milk, my lioness, thou daughter of a chieftain."

Other songs of love are chanted alternately by men and women. Some express hate and the desire for revenge, others jealousy and defiance, approaching the 'nith songs' of the Eskimos. This interesting study reveals anew how profoundly the poetic faculty is rooted in the nature of man as one of his earliest and most universal modes of expression.

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CURRENT NOTES ON METEOROLOGY.

COLONIZATION BY EUROPEANS IN THE TROPICS.

It is at present the almost universal opinion among those who have studied the relations of climate and man that complete acclimatization of Europeans in the tropics is impossible, and that therefore true colonization by the white race in the tropics is also impossible. In this connection Arthur Silva White, in an article on 'British Unity' in the *Scottish Geographical Magazine* for August, speaking of tropical countries, says that northern Europeans cannot establish permanent homes in climates so dissimilar to their own. Permanent homes have been established by Europeans in the West Indies, but their descendants have undergone inevitable deterioration by partial assimi-

lation with local elements, and India, although Europeans have been able to live there for prolonged periods, is not a colony of settlement, but a dependency. In accordance with this view of permanent settlement and colonization of Europeans in some countries, and of their non-acclimatization and of their being unable to live permanently in other countries, the author divides British colonies into two groups: Colonies of Settlement and Tropical Dependencies. Under the first are included Canada, Australia, and, to a modified extent, Cape Colony and Natal, all of which, except the northern part of Australia, lie in the Temperate Zones. Under Tropical Dependencies are included India, all Crown Colonies, Protectorates, and the numerous commercial settlements, islands, naval and coaling stations lying within the tropics. In the latter group Europeans form a mere fraction of the population, but owing to their superior attainments and resources, they act as rulers and overseers. The native population is necessarily servile, because the European colonist cannot perform hard labor out of doors in tropical climates, and as long as this large servile native population exists, a high civilization and political independence are out of the question. This whole subject of acclimatization and of colonization is of very great importance at the present day, when Great Britain, Germany, France and Italy are so actively extending their possessions in Africa. In many of these newly acquired territories true colonization by Europeans is and always will be impossible.

CHANGES OF TEMPERATURE DURING THE RECENT SOLAR ECLIPSE.

Nature has recently published two communications on the changes of air temperature during the solar eclipse of August 9th. One set of observations, made by H. R. Mill at Vadsö, is thus summarized: Speaking roughly, the eclipse began at 4, was total at 5, and was over by 6 o'clock. At 4:18 the temperature was 44.0° F.; at 4:23 it was 43.5°; at 4:28 and 4:33, 43.2°. From 4:35 to 4:43 the sun was shining brightly and the temperature rose to 43.3°; at 4:53 and 4:59, glimpses of the sun were caught before and after totality. The temperature from 4:48 to 4:58 was steady at 43.0°; and at 5 it had dropped to 42.1°; from 5:3 to 5:13 it stood at 42.3°. By 5:33 it had risen to 43.8°, and at 5:48, when the observations ceased, to 45.0°. The thermometer hung from the tripod of a 3-inch telescope, the bulb being about 18 inches from the ground. No special precautions were taken to shield it from the sun's rays, but, owing to the cloudiness, none were necessary.

The second set of observations was made by H. W. Blake, also at Vadsö, and both a sun and shade thermometer were used. The fall of the former, which was fully shaded by cloud, was, from 4:10 to just after totality, 2°, and its recovery from that point to 5:56, last contact, was 3.6°. The shade thermometer showed greater variations, viz., a fall of 3.35°, and a subsequent rise of 5.6° at 5:50.

It is to be hoped that other meteorological data may have been collected by the various expeditions sent out to observe the eclipse. The variations of pressure, the changes in wind direction and the deposition of dew are interesting facts, already observed in previous eclipses, and further data in regard to them would be valuable.

INDIAN METEOROLOGICAL PUBLICATIONS.

AMONG the recent publications of the Meteorological Department of India are Parts IV. to VII., inclusive, of Vol. IX. of the *Indian Meteorological Memoirs*. These volumes contain discussions of the hourly observations made respectively at Nagpur and Poona; Belgaum and Bellary; Trichinopoly, and Rangoon and Aden. They were

prepared by John Eliot, F. R. S., Meteorological Reporter to the Government of India.

AUSTRALIAN WEATHER.

MENTION was recently made in these *Notes* of a little volume entitled *Australian Weather*, containing three essays of considerable importance on matters connected with Australian meteorology. We have since been informed that the book can be purchased of G. Robertson & Co., George street, Sydney, N. S. W., for 2s. 6d. Meteorologists are certainly under a debt of gratitude to Hon. Ralph Abercromby, under whose auspices and at whose expense the book was published. Mr. Abercromby, though now incapacitated for active work by reason of poor health, still keeps up his interest in meteorology by providing means for others to do the work he is no longer able to accomplish.

NOTES.

AMONG other publications are the following:

O. PETTERSON: *Ueber die Beziehungen zwischen hydrographischen und meteorologischen Phänomenen.* Met. Zeitschr., August 1896, 285–321. An important paper, containing much of interest on the temperature and other conditions of the ocean surface in their relations to meteorological phenomena.

J. L. CLINE: *The Climate of Texas and the Cultivation of the Apple.* Reprinted from the Galveston *Daily News*, August 22, 1896. 8vo. Pp. 7. The author concludes: "There appears nothing in the climate of the greater portion of Texas to prevent successful apple culture except that irrigation will be necessary."

H. F. WILLIAMS: *Temperatures Injurious to Food Products in Storage and during Transportation, and Methods of Protection from the Same.* Prepared under the direction of the Chief of the Weather Bureau, Weather Bureau Bull. No. 13, 8vo., pp. 20. This is a revised and enlarged edition of a publication bearing the same title and originally issued as a circular of the Weather Bureau.

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ASTRONOMICAL NOTES.

AMONG recent American publications we notice Vol. IX. from the Washburn Observatory. It contains Prof. Comstock's investigation of the constants of aberration and refraction by means of a modification of M. Loewy's method. This consists in measuring with a micrometer the distances of stars which are about 120° apart on the sky. In order to bring the images of such distant stars simultaneously into the field of view of the telescope, a prism is placed outside of the object glass. From the variation of the distances throughout the year it is possible to deduce a value of the aberration which should be independent of any assumed star places. In order to make the refraction constant likewise independent of assumed star places, Prof. Comstock has employed sets of pairs of stars so situated that it was possible to take advantage of the fact that the sum of the successive differences of right ascension of any series of stars will be exactly 360°, provided the series begins and ends with the same star.

It is to be regretted that we have not space to devote to Prof. Comstock's work an extended review. Very high praise is due, however, to the skill and care with which the whole very large piece of work has been accomplished. It is a praiseworthy thing to turn out a large series of observations well made and reduced, with instrumental methods and with methods of reduction which have been well settled by the experience of successive generations of astronomers. But it is a very different thing to take up a new method of observing with a new form of instrument, and to carry out successfully an investigation of